



*Virginia
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**Dedicated to the Conservation of
Virginia's Wildlife and Related Natural Resources
and to the Betterment of
Outdoor Recreation in Virginia**

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Observations, conclusions and opinions expressed in *Virginia Wildlife* are those of the authors and do not necessarily reflect those of the members or staff of the Commission of Game and Inland Fisheries.

COVER: Native brook trout, by Duane Raver, Cary, North Carolina.

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Governor Holton

KEEP VIRGINIA BEAUTIFUL

COMMONWEALTH OF VIRGINIA
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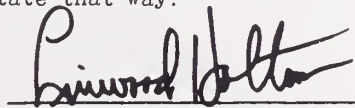
Keep Virginia Beautiful Weeks April 10-22, 1972

The period April 10-22, 1972, falling as it does just prior to Historic Garden Week in Virginia, has been designated "Keep Virginia Beautiful Weeks." During this period, I urge all citizens, organizations and industries, cities, counties, and communities to join in a gigantic statewide crusade to clean up all litter on public and private property.

The scenic beauty of the Virginia countryside is one of our state's most cherished heritages, and there is no greater shame than its willful desecration by the discarding of litter on our highways, streets, and private property.

The voluntary efforts of public-spirited citizens, working with Keep Virginia Beautiful, Incorporated, to remove ugliness and add beauty, have brought to Virginia more honors, awards, and citations than any state in the nation, making the Commonwealth more attractive to industry and tourism, and more pleasing to all Virginians.

Virginia is the most beautiful state in America, and if our people continue to work together as a team to remove ugliness and enhance the quality of the environment, we can keep our state that way.


Governor

LETTERS

Huge Rack



THE rack in the photograph was on a dead buck found on Appleberry Mountain in southern Albemarle County. The cause of the deer's death was not confirmed.

With a 23 inch inside spread and 15 points over an inch long, this rack is an outstanding specimen of the Virginia white-tail. If the left antler had matched the right, the rack would have been a candidate for the Boone and Crockett Record Book.

Although Albemarle County has not had many winners in the Game Commission's annual Big Buck Contest, this rack is brute evidence that Albemarle produces big bucks.

*Steve Rhodes
Schuyler*

Fox Trap



WHILE deer hunting off Leavell Shop Road (Route 639) in Spotsylvania County, Virginia, the last week in December (1971), my son and I came across an unusual scene.

I am enclosing some photos taken the next day before removing the dead (red) fox. The fox was hanging about 25 or 30 feet up. The only thing we could figure is that he went in the lower hollow after a squirrel and could not back down; so, he climbed to opening and tried to jump. Both hind legs were wedged in the hollow.

After removing fox, we examined him finding nothing except his left hind leg broken in about three or four places.

*Ralph Lovett
Fredericksburg*

The Human Hunter and His Needs

A Case Study

By BILL WEEKES
Blacksburg

IT would seem the desire to hunt is inherent in man. Unearthed in Africa have been remnants reflecting man's (or pre-man's) way of life as it was two million years ago. Even then he used weapons.

Robert Ardrey in *African Genesis* spoke of man as a predator possessed of a natural instinct to kill with a weapon.

Today there are those who look upon hunting as evil, just as cruelty and suffering may be so evaluated. Others see it as an art, a part of the American heritage which evaluates survival over hardship, an ennobling attribute.

Regardless of the point of view, hunting with weapons, as it has been handed down, continues to be a human activity and although hunting no longer banks survival on its success, it does seem to bank the fulfillment of certain human needs on its existence—at least for many.



U.S. Forest Service photo by Muir

Modern game management must be directed not only at producing and controlling wildlife populations, but also at satisfying the psychological needs of the human hunter.

There are now 14 million licensed hunters in the U.S. and, as many more promise to follow, the future hunter may be confronted by less and less private and public lands on which to do his thing.

This collision course hopefully can be mitigated somewhat by research reflecting values, which, in turn, reflect human needs. Such research will recognize the hunter, not only as a sportsman, but as a psychological and social entity. Such research hopefully will inspire new techniques and ought to lead to new vistas in land management that will open the door to an optimum amount of recreation in a given time span to a growing number of hunters.

To know what makes the hunter tick, therefore, means to know how to manage his hunting grounds, not only by controlling *game* populations, but by better satisfying the needs of the *human hunter* populations.

What then is this research?

Dr. James Kennedy, assistant professor in resource economics at Utah State University, presented his

doctorate thesis at VPI & SU, Blacksburg, Va., a couple years ago on the topic of deer hunters as consumers, a work that should be a stepping stone to future studies on defining what makes the hunter the way he is. Dr. Kennedy's work entailed recording the experience of about 400 hunters who visited Maryland's State Forest during the 1969 deer season.

Without touching upon the statistical intricacies of the study, we will confine the discussion to some of the conclusions Dr. Kennedy gleaned from the questionnaires returned to him.

He found hunters are exposed to what he termed "quality variables," variables found in the environment which tended to satisfy basic needs of the hunter. These quality variables influence enjoyment of the hunting experience and they include such things as seeing a deer, seeing fellow hunters, *chance* of success, and companionship. Each hunter, being, of course, a person as well as a statistic, values these quality variables in his own way.

What needs are these that are supposed to be fulfilled? They are general and basic—such as self respect, status, companionship and recognition.

These needs spring out of rewards, which are more specific in definition—suspense and challenge of seeking game, accomplishment in killing game, solitude, identification with nature, exercise, getting away from it all, getting out of doors, social cooperation and companionship.

Hence, for some hunters, merely going hunting is to enjoy the companionship of their buddies. Suppose, however, an argument arose between friends over who shot the deer. Companionship may then become the very quality variable which would make the hunting experience an unpleasant one on that particular occasion.

There may be a certain hunter of pioneer spirit who wants to feel self sufficient and visualizes himself seeking game in a primitive setting. Hunting for this fellow is solely a test of cunning between him and his quarry. He wants help from no one; no outside influences. This type of self actualization may be rewarded by solitude, identification with nature, the suspense and challenge of seeking game. To this hunter the important quality variables would be chance of success and not only seeing a deer, but in killing one. He values solitude and wants no companionship. He might not even want to see anyone else.

To most hunters, therefore, a slain buck is not just meat on the table—not these days. True, a hunter may well consume a deer, consume a rifle bullet or a shotgun shell. But, in addition to this, he consumes something much more significant—an *experience* that will hopefully satisfy his own personal need.

Out of a multitude of considerations as to what the hunter needs for a successful experience come some of these more significant findings by Dr. Kennedy, which

are as follows:

1. That the area where deer hunters hunted may have a significant effect on the enjoyment of the experience.

(Dr. Kennedy rejected a hypothesis, however, that recreationists showed some *rational* or *purposeful* site selection behavior. More than half said the hunting area doesn't make any difference, but these knew of only one other hunting area and valued other rewards higher than that of deer killing.)

2. That suspense and challenge of hunting ranked first and second as rewards while half of the nearly 400 respondents (to Dr. Kennedy's poll) did not even mention killing a deer as among the top three rewards.

(Out of those 90 percent parties that killed no deer, only 14 percent of the hunters indicated any dissatisfaction with not killing a deer. Further still, 72% said they saw less deer than they expected and 84% shot at less deer than expected. Yet most hunters enjoyed themselves.)

3. The game manager's fetish with size and condition of deer herds may often be of *less* consequence in providing hunter enjoyment than efforts on other aspects of management, such as improving roads and trail access and improving forest site distance so that deer can be easily seen.

(Some 92% of hunters polled at Pocomoke thought killing a deer was half luck while 40% saw no strong association between deer herd size and chances of success.)

This last point may lead one to conclude there *is* a danger of a game manager *assuming* what the hunters' demands are; that he may take a tunnel vision view of how *he* thinks others view the environment or *should* view the environment.

Dr. Kennedy recognized there is limited research on the sportsman as a psychological consumer. He suggests there be more research in the future on quality variables as a correlation with hunting enjoyment. There should be exploration in depth of the nature of expectations and aspirations for such factors as deer seen and "crowdedness" of hunting population; also, how past experience and time may alter hunter aspirations and expectations, and what influence off-season reflection has on the sportsman's decisions for hunting in the future.

We may well ask at this point: How can this research be applied? What can be done out in the field? An illustration or two should help one get some picture of the process:

A significant part of Dr. Kennedy's work had to do with the quality variable of *other hunters being seen*.

Hunters in the study viewed this variable with mixed feelings. A large number of hunters has a distinct advantage where moving deer is concerned. However, there could be a disadvantage of large numbers in risk to safety, risk to peace and quiet, risk of frightening the deer away. Some 67% were either seldom bothered or never bothered by other hunters while the remaining 33% were either very often bothered or sometimes bothered. This variable, however, could have

been influenced by Pocomoke's topography—the brushy condition of the forest that would screen others and make their numbers an asset to moving deer; the lack of organized drives and perhaps the tolerance to crowdedness of the predominantly urban group who hunted the Pocomoke.

Dr. Kennedy also discovered that there is a threshold of "crowdedness" beyond which the viewing of other hunters as an asset turns into a feeling that it is a disadvantage, that threshold being 20 hunters.

This example should serve to illustrate that there may be certain measurable variables that would lead to a management consideration as to just *how far* control of hunter use should be allowed in a given area. It should



L. L. Rue, III, photo

The satisfying hunting experience involves such "quality variables" as suspense and challenge in seeking game, solitude, identification with nature, exercise, "and getting away from it all." Nearly half the hunters interviewed did not mention killing a deer as among the top three rewards.

be noted that topography of an area may be an important index as well as number of hunters to be allowed on the public land.

Another example, one of personal experience, illustrates the concept of the sportsman as a psychological entity. On one occasion I came upon a wildlife clearing set up in George Washington National Forest in Alleghany County. It was a picturesque setting comprising a patch of autumn olive and a pond.

My host during the visit told me the clearing was related to man management. He said:

"The hunter sees this water hole area and his expectations run high. He feels the game manager is doing something for him and, therefore, if he doesn't get his deer that day he'll likely just blame his own bad luck."

So we have a quality variable set up—that of increasing the feeling by the hunter that he has a better *chance* to come in contact with his game. Through efforts such as this more hunters may get more enjoyment out of their experience than may be otherwise the case.

Virginia's Canadian Forests

Text and Photos by A. B. DECKER
Marion



HAVE you ever wanted to visit the dense northern forests so often featured in fiction by Jack London, James Oliver Curwood, Stewart Edward White, and others? You do not need to go to Alaska, Canada, or even New England to do so. Without setting foot outside the Old Dominion, you can have that experience.

About twenty-five thousand years ago, as the last ice age was coming to an end, the climate of the northern hemisphere was much colder than it is today. The southern edge of an immense ice sheet, which originated in the Labrador peninsula of Canada, stood in Pennsylvania, only two hundred miles from Virginia's present borders. The glacial advance had taken about one hundred thousand years. In its path the northern coniferous forest was forced southward, replacing the hardwood forests of most of what is now Virginia and neighboring states. Farther south, the great forest of mixed hardwoods remained in place.

The great ice front melted back when the climate warmed again. The northern forest retreated with the glacier, and parts of it became isolated on the higher elevations of the Appalachian Mountains. Thus was left what A. Randolph Shields, writing in *The Raven* for the Virginia Society of Ornithology, termed "... the last vestige ... of the great glacial front forest that once must have covered most of the state. ..."

Once a nearly unbroken sea of green covering many millions of acres, this forest of spruce and fir diminished to some thousands of acres by the time of European settlement. Cutting, burning, and agricultural use have since reduced this to about a thousand acres in Virginia.

The principal feature of what foresters know as the Canadian forest is the presence of spruce and fir trees. In Virginia these are red spruce (*Picea rubens*), Fraser fir (*Abies Fraseri*), or balsam fir (*Abies balsamea*). These are the common "Christmas trees" known in much of the east. Their spire shapes and fragrance add

much to the holiday scene. The fir growing in northwestern Virginia is balsam fir, while in the Mount Rogers area of the southwestern part of the state it is Fraser fir.

To see the Canadian forest in Virginia today, traveling to an elevation of over four thousand feet is usually required. On some north slopes, and in some dark, moist valleys, mostly in Highland County, there are small patches of spruce down to about thirty-five hundred feet. Five hundred miles to the northeast, the spruce-fir forest can be found at sea level on the coast of Maine.

Under the evergreen trees grow lichens, mosses, club-mosses (often called ground, running, or princess pine), ferns, and northern flowers and shrubs. The acid soils and damp forest floor are in sharp contrast to those of the drier, open hardwood forests below.

The wildlife of the spruce-fir forest is also different. Red squirrels, but not gray or fox squirrels, are abundant. Their smaller size allows them to live on the small seeds from spruce and fir cones.

The moist ground is a natural haven for salamanders, who must keep their skins moist or die. Rotting stumps and fallen tree trunks are favored hiding places. Mount Rogers and Whitetop are famous for a rich variety of salamanders.

The bird life is conspicuously different. Here are the identical species to be found in the same type of forest hundreds of miles to the north. Red-breasted nuthatches, black-capped chickadees, brown creepers, and golden-crowned kinglets live in these evergreen forests.

Limited to the higher mountains, the spruce-fir forests, or "types," as foresters term them, are found only in the western section of the state. There are scattered spruce and fir trees on the Blue Ridge, but one must go west of the Shenandoah Valley and to the Southwestern Plateau to find enough to call a forest. From Rockingham and Highland Counties in the north, to Washington County on the North Carolina border, is the area to find spruce and fir.

Highland County undoubtedly has second growth red spruce scattered over its area more generally than any other Virginia county, as motoring across it will show. Because most of Highland County is in private ownership, access can be a problem. Possibly the best place in northern Virginia to visit a spruce stand is around the small, primitive Forest Service campground at Locust Springs in the extreme northwest corner of Highland County. Along Locust Spring Run there is a strip of second growth spruce which, with plantations of thirty-five year old spruce adjoining, provides some of the atmosphere of the true northern softwood forest. The passage of time will improve this area.

Rockingham County has a stand of several acres of spruce on Shenandoah Mountain, about twenty miles north of Harrisonburg. This stand straddles the West Virginia border, and can be approached via U. S. Forest Service roads. Explicit instructions from George Washington National Forest people at Harrisonburg or Bridgewater are recommended. Many of the trees are quite large. A special feature of this stand is the occurrence of bunchberry (*Cornus canadensis*). This tiny dogwood is a typical plant of spruce-fir forests in the north, as its Latin specific name implies.

Farther south in Rockingham, about a mile north of Briery Gap, are about two acres of thirty-five year old planted balsam fir. Some of these trees are sixteen inches in diameter, and over forty feet tall. Aside from smaller areas of similar age at Big Meadows in Shenandoah National Park, this is probably the best place in the state to see balsam fir with the typical pitch "blisters" on the trunks.

Well to the southwest, along the mountain chain in Giles County, the U. S. Forest Service has established the Mountain Lake Scenic Area. This includes about sixty acres with spruce. There, in War Spur Branch, one can get much of the feel of the old evergreen forest. Spruce trees up to three feet in diameter, and hemlocks a foot thicker, lend majesty to this long narrow strip, which apparently survives because it is on ground too rocky to log in pre-bulldozer days.

As one travels southwest in Virginia, elevations increase, and good stands of spruce and fir become easier to find. On Clinch Mountain, bordering the verdant, pastoral bowl of Burkes Garden in Tazewell County, spruce once covered over a thousand acres. There are some areas of handsome spruce on a spur of this ridge, Beartown Mountain, which, at 4,710 feet, is the highest peak in the state outside the massive Whitetop-Mount Rogers-Pine Mountain uplift thirty miles to the south. Much that was once spruce forest on Clinch Mountain was burned after logging in a poorly advised attempt to make open grazing land. Recovery will take centuries.

None of this Jefferson National Forest area is accessible except on foot. The best way is across private lands from Burkes Garden or Thompson Valley, with the inevitable request for permission.

Another Beartown Mountain, this time in Russell County, elevation 4,689 feet, and the head of Red Creek below it, have more spruce. The mountain and much of

the northern part of the valley were logged and burned by 1926. It is making a steady recovery. The southern portion of the valley escaped destructive logging and burning. There are about three hundred acres of spruce type, and even more of spruce-hardwood. Best of all this area has a virgin forest look. An almost continuous carpet of moss covers the ground, stumps, and decaying logs. Shiny clubmoss and ferns complete the impression of undisturbed forest.

Notable at this area is a sense of isolation. The surrounding ridges cut off all sound from the occupied valleys below. One can truly feel he is a hundred miles from civilization in the Canadian wilderness.

This area is owned by the Virginia Commission of Game and Inland Fisheries. I was told by the biologist in charge that, except for a foot trail at some indefinite date, the spruce areas were to be left undisturbed. With the passage of time this will probably become the finest spruce stand in the state. Best present access is across private lands, preferably by way of Mutters Gap or Corn Valley.

There still remains, relatively untouched, about five hundred acres of magnificent Canadian forest on Virginia's two highest peaks: Mount Rogers (5,729 feet) and Whitetop (5,529 feet). This is mostly surrounded by a fine mixed spruce-northern hardwood forest, much of it in virgin condition. Here one can get the feel of the Canadian forest: the stillness, the resinous fragrance, the green twilight, and the damp, moss-covered earth.

Much of this forest can be seen in perspective from vantage points in adjacent Mount Rogers State Park, which is mostly on Haw Orchard Mountain, and has some small stands of spruce. This mountain forms a southward extension of the massive igneous rock formation of this highest part of Virginia. A fine motor road, passing through a nice second growth spruce stand on the way, leads to short trails to commanding overlooks. The alpine scenery looks more like the West than the East. In time foot and horse trails will connect this

Appalachian Trail hiker admires giant red spruce on Mount Rogers.



Virginia's Canadian Forests (Continued)

new state park with the adjoining National Forest areas on Mount Rogers and Pine Mountain.

There is a motor road to Whitetop, passing through a spruce stand on the way. The Whitetop bald, northernmost of those southern "balds" whose origins are a mystery, is bordered by red spruce. The Appalachian Trail, from the Elk Garden saddle between Whitetop and Mount Rogers, passes through two good stands of spruce before arriving at the bald.

Mount Rogers, Virginia's highest peak, is reached by foot trails from three directions. The shortest, and easiest, is from the Elk Garden saddle, and is about three and one-half miles long.

Delicate ecology of spruce forest upset by road construction on Whitetop Mountain.



While Whitetop, oddly enough, has only spruce, Mount Rogers, four miles distant, has both spruce and fir. As the hiker climbs the trail he will note the increase of spruce and fir until, as he approaches the summit, he enters a very dense stand of pure Fraser fir.

This high, wild, and beautiful alpine country lies where Grayson, Smyth, and Washington Counties meet. It can be reached from anywhere in Virginia in less than one day's drive. Because the area is mostly part of Jefferson National Forest, access is unlimited except in periods of extreme fire danger. Campgrounds and picnic areas are handy, while the convenient larger towns offer all the usual traveler's comforts.

Today the bulk of the spruce-fir forests of Virginia are in federal or state ownership. Under public administration, their unique values are recognized. They are reserved from all except scientific and some forms of recreational use.

Dense stands of pure spruce and fir are unusually susceptible to damage from road building, or even foot trail construction. We must hope that public agencies, in making these areas accessible, proceed with great care.

There is presently a steady die-back of spruce on Whitetop. This began from an opening created for the placement of a Federal Aviation Agency facility about ten years ago. A somewhat similar situation exists on Mount Rogers, where the trouble apparently began from a logging operation many years ago, or a blow-down in some storm. On both mountains young spruce and fir trees are replacing the dead.

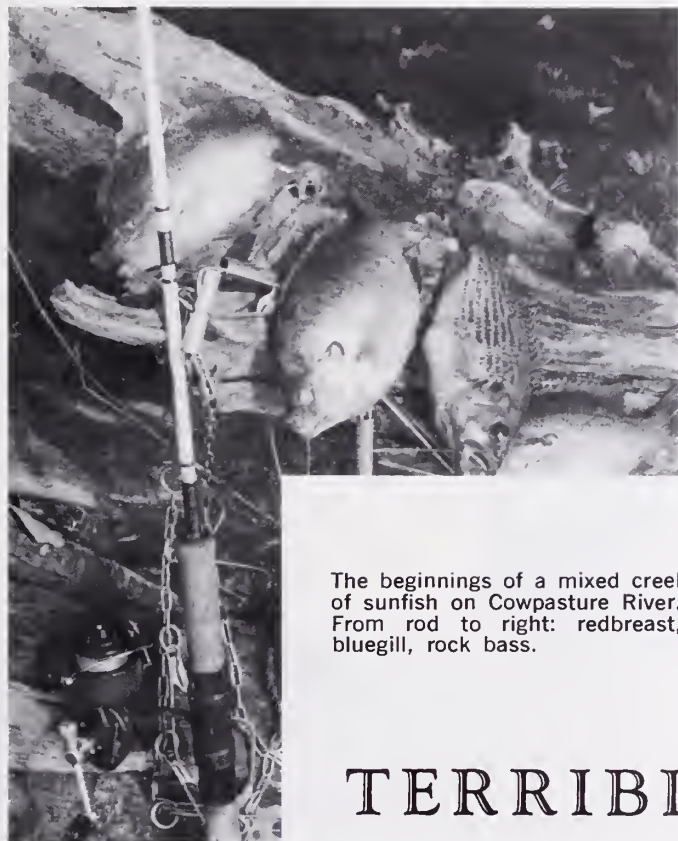
Insects and disease may pose a threat. At present the

balsam wooly aphid (*Adelges picea*) is causing widespread damage to Fraser fir in the Great Smoky Mountains, and has killed much of the scattered balsam fir in Shenandoah National Park. So far this pest has not been found on Mount Rogers, possibly due to isolation from other areas of fir. Remedial measures may be considered by the Forest Service should an infestation occur.

One other factor could destroy these unique forests. If, as some scientists claim, the climate is becoming warmer, the time may come when these conifers cannot make the necessary adaptation, and will finally disappear. That will, if it happens at all, be far in the future.

The Canadian forests of Virginia are remnants of the distant past, unique in their ecology, and accessible to anyone interested in the natural heritage of the Old Dominion.

TS. ELIOT once described April as the cruelest month of the year; but for the Virginia angler who fancies light tackle, Mr. Eliot was very mistaken. With the arrival of April, winter is only a memory and it's years until another returns. In the warming streams and rivers, the milky green of cold, snow-stained water is clearing, with nymphs and minnows resuming activity in the shallows. Where only a month before was empty water, now bright red-breast sunfish wave green fins in search of insects and careless bait-fish. The dusky rock bass's eyes glow a deeper scarlet as sunlight whispers that spawning time is near. Soon the "redeye" will take up his nesting stance in the shadow of a log or boulder, eager to attack any unwary creature that enters his territory.



The beginnings of a mixed creel of sunfish on Cowpasture River. From rod to right: redbreast, bluegill, rock bass.

be frustrating at times because of the large treble hooks.

Two plugs that are consistently good in Virginia waters are small balsa minnow lures that float at rest and dive on retrieve; the other is the ¼ ounce "injured minnow" type plug with a blunt nose and propeller on the tail. These should be plied gently close to the surface. Most fishermen have watched sunfish approach a surface lure, and know that the approach is usually tentative and timid, with the strike usually coming when the lure is motionless. Remember this, and fish your lures slowly for sunfish. Your stringer will heft the benefit!

In the spring, it's difficult to pick a "bad time" to be on the water, for the sunfish are active throughout the day. As the season progresses, evening and early morning become more productive.

It's far too easy for the uninitiated to lump "sunfish" into one group for fishing purposes. Nothing could be more erroneous. The various sunfishes are as much unlike as a largemouth and smallmouth bass. For the purposes of this discussion, we'll consider only the rock bass or "redeye" (*Ambloplites rupestris*), the bluegill (*Lepomis macrochirus*), and redbreast sunfish (*Lepomis auritus*), since these are the most commonly encountered sunfish in small rivers and streams of Virginia.

The rock bass is the bully of the trio, with a chunky body and disposition. He is handsome in a mossy sort of way with a flaming red iris and large mouth, extending past the middle of his eye. A typical rock bass encounter would go something like this: You're easing along the gravelly bottom of a small stream, eyes and spinning rod cocked for action. The water is clear and preferably moving. Just ahead is a large submerged rock. Wise in the way of the redeye, you cast to the shadowed side of the rock. The lure hits the water, turns with the current, then something dark and green hurtles from the rock, smashing into the lure like unto

TERRIBLE TRIO

BY PETE ELKINS
Lexington

For the fisherman who properly equips himself, no finer sport is possible in fresh water. River and stream sunfish will normally run on the small size when compared to other freshwater gamefish, but a rock bass in the Shenandoah or Maury may exceed one olive-backed pound. Since the prey is small, maximum sport involves very light tackle, ideally an ultralight spinning reel, matching rod, with two to four pound monofilament.

Such an outfit is well suited to casting the small lures that are most effective for the sunfish family. Any tackle shop has an abundant choice of proper lures; however, as a general guide the lures should be chosen on their basis to perform well in shallow water. This means that a selected spinner has a thin blade that revolves at a crawl of the reel handle. Plugs can be amazingly effective if they're chosen in the ¼ ounce or smaller range. Rock bass, bluegills, and redbreasts will slash into much larger plugs, but hooking them can

a citation smallmouth. A short, powerful run back toward his rock, a broad lateral sweep toward the rod, then a gasping surrender. The rock bass comes on strong, but strikes his colors fast. He can get big in suitable habitat, and his firm white flesh makes him delicious in the pan. Another appealing characteristic of the rock bass is the fact that he keeps good company. Find smallmouth water, and you'll find rock bass.

Also found in smallmouth habitat is the redbreast. This little sunfish is the warrior of his family. His belly is bright orange. His cheeks are striped with vivid warpaint, and his courage is long. The redbreast is more of an insect eater than the rock bass; however, he rarely stops to question the identity of a small, properly presented lure. In a stream or river, look for the redbreast under overhanging banks or near the edge of a swirling current. When the spring sun heats the water into the

(Continued on page 22)

ACCORDING to our journals the Ruby-Throated Hummingbirds arrive on our acres above the Hazel River on April 28 of each year. This year the first one was a day tardy, but he brought with him a female. Usually the females arrive later. My husband hurriedly filled the two artificial feeding tubes with the sugar-water solution and hung them in the usual places, one in the dogwood tree by the patio and the other on a nearby oak.

The visitors perched on the telephone wire to watch the familiar procedure, then flew immediately to them to sip long and hungrily. Red tulips were open, forsythia-gold cups in bloom, and many wild blossoms that held natural nectar were available. These birds, who must have been here before, recognized the feeders and pre-

The new pair departed but not for long. They hid around in the peony bushes or in the evergreens by the wall waiting their chances at the feeders. We placed a third tube at the far end of the yard and hoped with the dogwood now in flower, the columbines open and honeysuckle sweet with fragrance, there could be a truce. No luck; our tyrant became bolder. With angry squeaks the two tiny male fighters flew at each other jabbing with their long needle-sharp bills, darting in and out, circling, dodging, moving so fast it was impossible to tell one from the other. The females were strangely absent.

At some time among the sun-patterns of the trees there must have been a duel-to-the-death between the males as one disappeared completely, and we felt sure



EXQUISITE LITTLE TYRANT

By KATHERINE W. MOSELEY
Rixeyville

Female ruby-throated hummingbird at nest.

Leonard Rue photo

ferred man-made syrup.

All was idyllic as the pair hovered over the flowers but returned again and again to the dogwood which held their favorite feeder. For the first time we had a glimpse of the male courting dance as he swung back and forth in a great arc almost to the ground and up again.

Little did we know that this gorgeous little bird, not much larger than a man's thumb, was a tyrant at heart, an aggressive despot, and a first-class bully. A second pair of hummingbirds arrived to perch on the wire and attempt to use the feeders. From that day on open war was declared. The first male took off after the pair of newcomers with his head feathers bristling high and screeching shrill battle cries.

it was the late-comer. We are glad we missed the sorry sight of the joust of the two shining little knights with lightning speed and maneuverability at combat with lances. The rapier bill of one either pierced the other fatally or sent him to find a more peaceful garden.

The widow remained. Now on our acres, where in other years we have had five pairs of hummingbirds that crisscrossed the airways, there were only three lone hummers. We waited to see if this shift in population would quiet and soothe the victor. Not at all; no bigamist, he. Mating was undoubtedly over and females were also enemies if they approached his feeding territory. He flew a constant, nervous patrol from one feeder to the other and then perched in the dogwood tree to spy from under the cover of leafy boughs. The minute

male dominated the surrounding area which is quite large. Either courageous or foolish he took off after larger birds and was ignored.

We felt sorry for the two females who were probably mothers with eggs in a pair of tiny-cupped nests made of felted plant fiber, ferns, and dandelion fluff, laced around with spider silk. The nests would be saddled out of sight in separate trees like a knot on a limb from twelve to thirty feet above ground. In each nest would be one or two pure white bean-sized eggs. Even if the fathers were around the raising of the young would be the mothers' business.

The eggs hatch after sixteen days and the babies stay in the nest for about three weeks. The mother incubates, broods the young for warmth, drives off intruders, and feeds her children by regurgitation, ramming her sharp bill down into their throats.

Throughout this time the mothers had to eat, hostile male or not. We began to notice a pattern to the three birds' behavior. The male watched in the dogwood as one female flew to the favorite feeder. Immediately he dive-bombed her with angry squeaks and she flew away with him in fast pursuit. At that very moment the other female arrived to drink long at the tube and departed. Very soon a female showed herself again and once more he drove this one off while the other female flew in to feed.

They undoubtedly took turns distracting the despot from his look-out post so the other could eat. Let no male, be he pea-brained or a mental giant, pit his wits against two females in cahoots! The mothers must have taught their young to drink from nature's deep-throated blossoms and stay away from man-made bottles of syrup guarded by a Napoleonic ruby-throat.

Hummingbirds are native only to the Americas. It is in the subtropical zone of Colombia and Ecuador that they are found in great numbers, members of the family TROCHILIDAE. Certain of these birds are migrants, and there are eighteen species in the United States but only eight of these species get far from the Mexican border. The ruby-throat is the only one that inhabits the eastern United States.

The hummingbird is of exquisite, jewel-like beauty. Its minute size, about three and one-half inches, and its metallic, glowing brilliance are the chief characteristics. The backs of the males and females are bronze-green, their underparts a dullish brown-gray. In bright sunshine both sexes are dazzling. The throat of the male is a flaming, ruby red. We became aware that somehow he had the knack of spreading his red throat feathers so that they flashed. He often darted at our heads if the tubes were empty and always blazed his throat in our faces. If angered while feeding, he seemed to turn on the red flash as a danger signal. Females and wintering males lack this color.

Hummingbirds are both aerial and arboreal but must depend on flight or perching for protection and food. Their fragile feet are useless tools for walking, hopping, or scratching. They differ from all other birds in their flight and feeding habits. Their food consists of nectar

sipped from flowers or man's artificial feeders and small insects. We watched this pugnacious male of our garden dart often from his perch on the wire to snatch in his bill a minute flying insect with the same winged spurt the larger insect-catching birds use. The hummers also scoop insects caught in syrupy drippings from some trees and plants.

Since the hummingbird is a nectar sipper, it has a bill and tongue adapted for this purpose. Inside the bill is a long, tubular shaped tongue which may be thrust out past the slender bill to turn and curve as it probes for the last bit of syrup in the corollas of flowers. Because of the hummingbirds' specialized feeding habits, many plants depend on them for pollination. In fact a few red-blossomed flowers, ignored by many insects, would die away without the help of the little hummers.

Hummingbirds are greedy by necessity. There is an incessant requirement for food. Their frenetic flight and almost constant wing-beat burn fuel quickly, and food must be constantly available. Each bird may consume about half of its weight in food each day. We have noticed through the summers that all of the hummingbirds drink almost constantly at dusk to sustain them through the night at which time they fall into a kind of stupor or torpor while the energy-using processes slow. They are always back at the feeders or into flower throats by early dawn.

Their name is due to the humming or whirring sound made by rapidly moving wings. The little bird can fly forward, backward, sideways, or dart upward at the rate of fifty to sixty wingbeats a second. The wings, unlike the wings of other birds, rotate at the shoulders. Its aerial maneuvering represents the ultimate perfection sought by aeronautical engineers. When poised before a blossom, it is able to hold its place perfectly still save for the vibration of the wings which move so rapidly as to be almost invisible or misted in haze.

All of this summer we have watched the never-ending drama of the three hummingbirds. There have been no others. Incredibly all three ignore the last feeder we hung at the far end of the yard and concentrate on the two nearest the house.

Now in late August the sun dips lower to the horizon and a muted twilight comes earlier. We know our three summer visitors are faced with a hazardous, long journey. Perhaps they anticipate the adventure. Each will take off singly, since hummingbirds are not of a sociable migrating group. Florida may be their only stop before launching out across the Gulf of Mexico straight for Yucatan or Central America.

Next spring some homecoming instinct will stir in each tiny brain, and there will be an unblurred memory of the woods above the Hazel River where hangs a constant supply of sugar-water. How else do they know to go directly to these places? We wonder about our exquisite little tyrant and if he can fight his way south and back again. We hope so, and we do not doubt his vigor and determination. We shall know next April if again he is the only male hummingbird around.

Fishing for Natives

By MARTIN CLARK
Stuart

CRAWLING on my hands and knees, my ultra-light rod clamped between my teeth, I stopped a few feet short of my destination. Half squatting, I cast; my lure settled just below a small waterfall, and swirled off in the dark water's swift current. In a few seconds, my low-held rod-tip bowed. Quickly, I stood up, fighting a beautiful native rainbow trout. After a short run and several spirited leaps, I played it to the bank. I admired the emerald-green colored fish a moment before releasing it.

The fishing above took place in a small stream called Rhody Creek. This small tributary, which runs into the Mayo River, looks nothing at all like a trout stream. The creek passes under a bridge on Route #58, about three miles east of Stuart, Virginia. After crossing under the bridge, it meets the Mayo River about three hundred feet downstream, to form an enormous hole. Federal trout were stocked in 1966, but fishing pressure is exceptionally light now, with only seven or eight anglers disturbing the surface with lures or bait yearly.

These wild trout live on crayfish, small lizards, nymphs, and terrestrials. In most all pools, trout feed lazily on minnows. The fish readily hit small spoons and spinners, and often kill fly-spinner combos. As for bait, the fish will succumb to worms, salmon eggs, grasshoppers, crickets, and occasionally, small minnows. Dry flies seldom produce, but most wet patterns, woolly worms, and most small streamers are excellent.

Rhody Creek is the type of stream for people who like to work for their fish. These trout are shy, unlike those raised in a hatchery. They will spook at anything they detect not natural.

Unless it is impossible, I try to walk on the shore. If it is a must, I wade upstream in a low crouch. Two to four pound test line is a must. In this type of fishing, an ultra-light rod is a great convenience. A fly-rod about seven or eight feet, with sinking line, and a tapered two-or-three pound leader is adequate.

In casting, the lure must look exceptionally *natural*, drifting with the current, just off the bottom; the fish usually hits hard and only once. In one of my first attempts to fish the stream, I hung into a fat twelve-incher; after keeping him out of the coarse brush for about three minutes, and landing him, it was plain that he was a stocked fish. His color was much duller than the other four rainbows I caught that day.

On my second trip, I cut off on a winding side road, and followed the stream uphill, reaching a second bridge. Under the bridge lay several holes which were made by several concerned anglers earlier this summer. My idea this time was to fish the not-so-trouty-looking places. After my second cast, I could see that my efforts to work the river with a fly-rod, up and down, were



Brook trout.

futile. I switched to my spinning outfit, and with high hopes it would pay off. It did. Fishing in swift water, my low-set drag suddenly screamed off violently. I whipped my wrists to set the hook; the fish, already downstream, did not seem to want to show himself. He stayed underwater, putting up great resistance. I played him carefully to the bank. After removing the lure, a small spoon firmly lodged in the fish's jaw, I found he measured only eleven inches. After releasing him, I walked downstream, catching two more natives, releasing them both to battle again.

Any angler who has fly-fished, has known frustration. I got this feeling the first time I tried it on Rhody Creek. I began to plan how to catch one of these wild trout on a fly. Noticing the small minnows scurrying about, I decided to try a small streamer, and concentrate my efforts on one particular spot. I tied on a size-number-six streamer to my tapered leader, and worked the hole diligently from all angles, with different retrieves. Finally, after about fifteen minutes, my reward came, after a gallant battle with a seven-inch rainbow was over. All of my efforts to catch another trout failed. Still, I had pleased myself by taking these wild beauties on both fly and spin tackle.

After fishing for the heart-stopping little fish, other trout seem like awkward giants, when put to a pound-to-pound basis with the native rainbow.

We are lucky to have native trout streams in Virginia, but they are becoming scarce. Careless fishermen are killing many more fish than necessary. Anglers should try to conserve streams like Rhody Creek, simply because native trout can't be raised in a hatchery.

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

SOLID WASTE RECYCLING PILOT PLANT SCHEDULED FOR RICHMOND. The Richmond Regional Planning District Commission has approved the preparation of a demonstration grant for the establishment of, by the Reynolds Metals Company, a pilot PYROLYSIS recycling plant in Richmond. The grant request next goes to the Environmental Protection Agency for approval.

Pyrolysis is a procedure by which solid waste is separated by 700 degree fahrenheit heat in the absence of oxygen. Garbage, trash, glass, steel, aluminum, zinc, brass and copper are processed in the "closed system." Recovery of the usable end products is achieved by a multi-process, grinding, shredding, drying, magnetic separation and screening operation. The "off gas" result of the process can be used as fuel.

Approval by the Environmental Protection Agency would enable Reynolds to convert a plant in Chesterfield County for the 3 year pilot project. This would be the first full scale pyrolysis operation in the United States.

VIRGINIA RECEIVES 3 MILLION FROM FEDERAL WILDLIFE FUNDS. Virginia has been allocated \$780,781 in Federal Aid to fish and wildlife restoration for the fiscal year ending June 30, 1972. Some \$208,192 is earmarked for fish projects, and the remaining \$582,589 will go for game work. The monies are generated respectively by a 10% tax on fishing tackle and an 11% tax on firearms and ammunition. These excise taxes are paid at the manufacturers' level and are included in the retail prices of taxed items.

The monies are matched with 25% state funds and used for land acquisition and development of facilities for sportsmen, for lake construction and development, for habitat improvement and restocking of game, and for research. The monies are allocated to the states on the basis of both land area and the number of licensed hunters and fishermen.

PREDATOR CONTROL REPORT RECOMMENDS POISON BAN. A recommendation to prohibit the use of all poisons in federal and state predator control programs highlighted a report released by the President's Council on Environmental Quality and the Interior Department, the Wildlife Management Institute reports. The report is the result of a study by an advisory committee appointed last year to investigate predator control nationwide and submit recommendations for changes. It said that the field force of Interior's Division of Wildlife Services, which administers federal predator control activity, should be professionalized by employing qualified wildlife biologists who understand and respect public interests and values in wildlife as well as those of the livestock industry.

The report stated that all states should establish a cooperative trapper-training extension program as a means of aiding landowners in minimum necessary control of predators on private land. Following the release of the report, the President announced that he was issuing an Executive Order "barring the use of poisons for predator control on all public lands. (Exceptions will be made only for emergency situations.)"

FISHING TOURNAMENTS SCHEDULED. The Henry County Bass Masters will hold their bass championship at Lake Gaston April 22 and 23. Headquarters will be at the Holly Grove KOA campground. The entry fee is \$25. For details contact Henry Co. Bass Masters, Box 988, Martinsville, Va. 24112.

The Optimist Club of Cave Spring will again host the Annual Smith Mountain Lake Fishing Tournament April 28, 29 and 30. Prizes totalling \$7,000 will be awarded in a variety of categories. Tickets may be obtained from the Olympic Sport Shop, 2825 Brambliton Avenue S.W., Roanoke, Va. 24015.



Wayne McDowell, left, and friend Leon Anderson with 8 large-mouth bass, and a string of 16 walleye topped by the year's largest catch, an 8 pound 14 ounce. They caught the fish in Lake Gaston trolling between 8 and 35 feet deep along the edges of submerged ridges. McDowell is a member of the Bass Anglers Sportsman Society and the Old Dominion Bass Masters.

DURING 1971 a total of 1016 fish qualified for Virginia Wildlife Trophy Fish Citations, a new record for the program. Not only was it a good fishing year, but interest in big fish seems to be picking up. Largemouth bass were still the most popular, with 267 weighing 8 pounds and over turned in for citations topped by a new record 13 pound 4 ounce. Pickerel fishermen had a good year also, accounting for 111 pike over the 4 pound minimum. Channel cat are always a popular species, but the 126 whiskered giants entered this year was an all-time record number.

Some of Virginia's newer species of exotic fishes claimed more than their share of the angling spotlight during the year. A total of 76 muskellunge rated citations, including a new state record 29 pounder from Smith Mountain Lake. A new record of 17 pounds was also set in the northern pike category by a specimen from Beaver Creek Lake near Charlottesville, one of 15 which received citations during the year. Only four coho salmon were submitted for citations, but these created quite a furor since each set a subsequent new

Ralph Jenkins holds the spinning outfit that subdued this 3 pound 8 ounce bluegill which topped all other sunfish catches for the year. He landed the monster in a moss covered private pond.



THE ONES

By HARRY GILLAM
Information Officer

Danny Jones hefts a 23 pound 15 ounce channel cat that loaded on to a trolled Bomber in Smith Mountain Lake. The Commission obtained a replica of the big cat for its Richmond Office display.



state record for the species. Although not a new exotic, brown trout seem to be making a more prominent showing each year. During 1971 there were 42 that received citations, among them an 11 pound 9 ounce that set a new state record.

Sports Afield magazine, which has cooperated with Virginia for the past 6 years in issuing Sports Afield citations and awards to qualifying persons who submitted fish for Virginia Wildlife Citations, announced early this year that they were discontinuing this State Fishing Awards program. Thus, anglers with qualifying catches will no longer get a second citation, or medal, from Sports Afield. We still maintain liaison with *Field and Stream* magazine for the purpose of establishing new world records, if any should turn up in Virginia. So far, we have captured the top world spot with a 4 pound 8 ounce redear sunfish caught in 1970 and are currently trying to get a 17 pound 8 ounce grackle caught in Chickahominy lake in 1964 authenticated as a new world record, beating out a currently listed 16 pound 12 ounce from Texas.

Fish are unpredictable critters, and perhaps this is what makes angling for them so intriguing. Listening to how someone else caught a fish might not help you catch one yourself, but every fisherman enjoys a good fish story. Here, in their own words, are some of last year's top anglers' accounts of how they caught their big ones.

BAILED OUT

"It was a nice June afternoon so I decided to try a little pond fishing near home," writes Ralph Jenkins of Winchester. "I was casting for bass when the bluegill came up out of four feet of moss, then plunged back with my line. I happened to be using a Mitchell

THAT DIDN'T GET AWAY

Summary of Fish Citation Entries

January 1971—December 1971

No. of Entries		Species	Angler	Largest Catch		Location	Established Record		Citation Minimum (lbs.)
1971	1970			lb.	oz.		lb.	oz.	
42	24	Brown Trout	N. A. Creasy	11	9	Spring Run	11	9	2
26	22	Carp	Douglas P. Henry	37		Nabsco Creek	60		20
126	97	Channel Cat	Bennie W. Jones	23	15	Smith Mt. Lake	26		10
22	15	Crappie	Lawrence Howard	4	7	Kerr Lake	4	13 ½	2 ½
1	3	Flathead Cat	Kerksey Clevinger	24	4	New River	45		10
15	22	Gar	Robert M. Whitehead	20		Western Branch	20		10
35	11	Grindle	David M. Ray	14	12	Chickahominy Lake	17	8	10
	1	Kentucky Bass	Cynthia G. Rippon	2	4	Claytor Lake	2	4	3
267	172	Largemouth Bass	Charles D. Hamm	13	4	Gaston Lake	13	4	8
76	65	Muskellunge	W. R. Pugh	29		Smith Mt. Lake	29		6
15	10	Northern Pike	Hansford Vest	17		Beaver Creek	17		6
111	67	Pickereel	Steve DeZulovich	7	11	Occoquan Creek	7	11	4
6	17	Rainbow Trout	Frances Collins	8	3	Smith Mt. Lake	9	14	5
50	93	Striped Bass	Byrt M. Hawk	41		Smith Island	32	3	10
2	10	Rock Bass	Julian Seligman	1	10	Occoquan Reservoir	2	2	1
86	104	Smallmouth Bass	E. L. Fisher	7	3	Smith Mt. Lake	8		4
64	56	Sunfish	Ralph W. Jenkins	3	8	Garbers Pond	4	8	1
9	5	Walleye	Wayne McDowell	8	14	Lake Gaston	17		8
17	10	White Bass	Joan Fisher	3	6	Smith Mt. Lake	3	6	2
13	9	White Perch	David L. Sides	1	8	Lake Joyce	2		1
29	12	Yellow Perch	Billy Collins	1	12	Aquia Creek	1	12	1
4	1	Coho Salmon	Melvin Chilton	8	12	Philpott	8	12	3
1,016	826								

330 with automatic bail which flew open giving the fish line. Otherwise I would have lost it. After about a 30 minute battle I finally worked the fish into a muskrat path and got it close enough to shore so I could get my hand on it. It weighed in at 3 pounds 8 ounces. I can still hardly believe it!"

SPIT ON THE BAIT

"My stepfather took me to Lake Joyce at Virginia Beach one day last December," says David Sides of Norfolk who is 9 years old. "I was using a reed pole fishing off the bank. I just spit on my hook and red worm and threw it out in the water. This big white perch took it, but I got it in without too much trouble. It weighed 1 pound 8 ounces. My stepfather was very proud of me."



In spite of the fact that the striper outweighs it, the near record 4 pound 7 ounce crappie in Lawrence Howard's left hand was his most significant catch during a day's fishing at Buggs Island Lake since it was the largest caught last year. The striper was no slouch, weighing 23 pounds 4 ounces.

LIVELY SNAG

"My fishing partner, Allen Beckner, and I were trolling in the Gills Creek section of Smith Mountain Lake," writes Danny Jones of Roanoke. "I had just changed from bucktail to a brown and black spotted Bomber which was running between 75 and 100 feet behind the boat. I had just positioned the rod and sat down when I looked and saw it going over the back of the boat. My first thought was that the lure had hung on a snag but when I grabbed the rod I immediately felt the fish, which turned out to be a channel cat. He went to the bottom for about 5 minutes and then managed to hang himself on a snag from which it took me another 7 minutes or so to free him. He made about 4 more runs before I could get him to the boat where Allen netted him. We knew he was close to the record and he weighed in at 23 pounds 15 ounces, less than 3 pounds shy."

TAKE A BOY FOR LUCK

"I had decided to take my 6 year old son William along for luck when I went fishing in Kerr Lake with my brother Johnny," relates Lawrence Howard of Chapel Hill. "I was jigging along the bank with a peewee fly when the crappie took it. I knew he was a big one by the way it hit, and it put up a good fight. We weighed it on a hand scales in the tacklebox and it registered 4-¾ pounds, mighty close to the state record, but when we got it to the official scales it only weighed 4 pounds 7 ounces—still a mighty fine crappie. It was the finest fishing day I ever had."

"I was fishing a No. 3 Mepps spinner in Beaver Creek lake when that northern pike loaded on," writes Hansford Vest of Waynesboro. "He would swim in to the bank, then stand on his tail and zoom out about 40 feet into the lake making the drag sing. Finally, on the fifth of these spectacular runs, he came into the bank exhausted. Not having a landing net, I jumped into the shallow water, scooped him up in my arms and tossed him onto the bank. He weighed 17 pounds and was 39 inches long. I was pretty proud after trying for five years to catch a trophy pike like this from Beaver Creek lake."

OUT OF TURN

"My friend, George Littleton, and I spent the night camped along the backwaters of the Potomac in Prince William county," says Douglas Henry of Front Royal. "At daylight we launched our canoe for what we hoped was to be an exciting day of bowfishing as the carp were threshing about among the lily pads all around us. We were taking turns shooting while the other handled the canoe, and we both had shot enough little ones that were looking for some larger game. It was George's turn, and I was getting ready to take my turn on the paddle when I saw the big one coming. I knew George wasn't ready and I couldn't let this one go by! I drew the arrow and let fly, striking the big fish in the back. The arrow apparently broke his backbone since he didn't fight much after that, but as I hefted him into the canoe I knew I had never seen a bigger carp. Realizing that this was a good fish, we cut our fishing short to rush him to a weighing station where he tipped the scales at 37 pounds and measured 37-1/2 inches in length. Although short, the trip was most memorable."

ANGLER IN ORBIT

"After spending most of the day on camp chores, I decided to get in a couple of hours' fishing before dark," says Chuck Hamm of Richmond. "I picked a spot where the water is 12-15 feet deep with quite a few stumps for cover. It is an area where big bass hang out, and I had caught a 6 pounder earlier that morning. I was using a black Fliptail Daddy Worm and had just taken a 3 to 4 pound bass a couple of casts before the big one took my lure. When I set the hook I knew it was a good fish, but I couldn't tell his size because he had tangled the line in roots or some other underwater cover. After struggling with him for what seemed an eternity, he came untangled and headed for the surface. The fish exploded from the water like a rocket, and I finally saw its awesome size spotlighted by the setting sun. I know it was a terrific fish and concentrated on keeping it off the bottom and from jumping again. After a brief struggle, it was brought to net, a 13 pound 4 ounce and a new state record."

"After an unsuccessful foray for turkeys in Bath county last October I decided to try my luck on trout," writes Nelson Creasy of Hollins, Virginia. "I picked up my spinning outfit and started fishing in Spring Run, a tributary of the Cowpasture River. I was using an eight pound test line with plastic salmon eggs when a big fish took the bait. I used pressure to get the fish in shallow water, and jumped in with it so I could handle it better. A friend supplied a net which I used to land the fish which turned out to be a new state record 20-5/8 inch brown trout that weighed 11 pounds 9 ounces."

ROD DOUBLED

"It was the day after trout season opened, and only a handful of fishermen dotted the banks of the Smith River," relates Warren Johnston of Collinsville. "Perry Hylton and I were drifting salmon eggs in the current and had picked up a couple of average trout. We were fishing a fairly large pool when my rod suddenly bent double and the water exploded. I knew this was a pretty powerful fish because I was using a fairly stiff rod. After a 10 minute battle I landed a 2 pound trout which I first thought was a brook but later examination of the photo revealed to be a brown."

SUBMARINE ON A COBWEB

"I was fishing for crappie with friends Garland Edwards and Dick Saunders along some pilings in Occoquan Creek at Woodbridge," writes Steve De Zulovich of Alexandria, Virginia. "We had been gobbler hunting on the Quantico Area that morning and decided to give the fish a try. When the big pike grabbed the 1/32 oz. Dollfly, he scarcely felt the pressure of the 2 pound line on my ultra-light outfit until he surfaced like a big submarine and saw me. He then made the water look like a giant mixing bowl as he threshed to escape. I spent what seemed like half the afternoon trying to steer the big fish clear of submerged logs and brush that would quickly snap the cobweb line. Finally, when he surfaced for the umpteenth time, we managed to get him into the boat. At 7 pounds 11 ounces this pickerel was the finest prize of my 12 years of ultra-light fishing."

Angler Steve DeZulovich holds a 7 pound 11 ounce chain pickerel, from Occoquan Reservoir, which established a new state record. The string of trout, representing a day and a half's catch, is further proof of the DeZulovich angling skill.



Bluets

By ELIZABETH MURRAY
Dept. of Biology, Univ. of Va.

Illustrated by Lucile Walton



BLUETS belong to the Rubiaceae, or madder family, an enormous and diverse group of plants.

The majority of them are tropical, and some are of great economic importance, such as coffee and cinchona, the Peruvian bark tree from which quinine is derived. Representatives of the family in our area, in addition to bluets, include the partridge-berry, field-madder, buttonweed and cleavers or goosegrass.

The family as a whole contains both woody and herbaceous plants. The leaves are either whorled or connected by interposed stipules, that is, a kind of flange between the leaves. The petals are usually united to form a tube, onto which the stamens are inserted. There may be four or five petals. In the bluet, *Houstonia caerulea*, there are four, the blades spreading out at right angles above the corolla tube. There are four stamens and a two-chambered ovary, surmounted by a style and two stigmas.

The flowers are usually blue, a marvellous Italian-sky blue with yellow centers, but they can vary from lilac through pink to white. Bluets grow in tufts. From the dense mat of basal leaves arise leafy stems 2" to 8" tall, sometimes branching once, each branch tipped with a single flower about half an inch across. The plants spread by slender creeping underground stems or rhizomes.

Bluets can be found in a number of different habitats but prefer open fields and the edges of woods, also frequently growing along paths and around cleared areas. Despite their adaptability, they are something remarkably hard to transplant, and stubbornly refuse to take hold in a new environment, even if the conditions seem to be quite as propitious as the original ones. This is a pity because they are some of the few flowers I have written about so far which I can honestly say could be dug up without harming the species. There really are lots of bluets. One of my reference books puts them on an encouraging list headed "plants which may be freely

picked."

Bluets are dimorphous; that is, the flowers are of two kinds. In one kind, the anthers stick out beyond the flower, and the style is very short; in the other, the anthers are included inside the corolla tube and the style is much longer. When picking English primroses as a child, I always referred to this condition as "pin-eyed" and "thrum-eyed," and it was fun to find plants of both kinds on any one trip. The condition encourages cross-pollination, since selfing becomes mechanically an awkward business; also, plants will tend to be fertilized with pollen from the opposite kind. When a pollinating insect lands on a flower and reaches down into it, pollen from the "pin" flowers (short anthers) will accumulate on the tip of the proboscis, whereas pollen from the "thrum" flowers will collect further up the face. The pollen on the tip is more likely to be rubbed off on the included stigmas of the thrum flowers; pollen higher up the face will land on the more protruding stigmas of the pin flowers.

Houstonia caerulea has a wide distribution from Nova Scotia and Quebec south to Georgia and Alabama and west to Missouri, Wisconsin and Ontario, but it is commoner in the northeastern parts of its range. The other common species in this part of the world is *H. purpurea*, known colloquially simply as *Houstonia*. This is a taller plant, 4" to 16" high with several upright, leafy stems and very small white, blue or pink flowers in a cluster at the top.

Bluets have a large number of common names, most of them connected in some way with purity and puritanism. I suppose these were inspired by the simplicity of design of the flowers themselves. Amongst others, they may be known as Angel-eyes, Venus' Pride, Quaker Bonnets, Quaker Ladies, Innocence and Dwarf Pink. I like Mr. Stack's comment in his child's flower book of 60 years ago—although perhaps he is a little hard on the Friends: "When one has viewed the myriads of Quaker Ladies that bloom so vigorously from April to July, it is not difficult to realize that the spirit which moved them never prompted their dignified namesakes with such strenuous activity. Otherwise their azure bonnets would never have graced our grassy meadows with so much profusion as we are annually privileged to enjoy."

Linnaeus named the genus for William Houstoun, an early eighteenth century botanist. Houstoun was a Scot who collected mainly in tropical America and the

(Continued on page 18)

"I WISH you'd been along! You could see forever . . . and, would you believe it . . . there was a red-bearded fellow playing Greensleeves on the bagpipes right on top of Old Rag! It was totally unique . . . just tremendous hearing that music made for the mountains! The bagpiper's friends were gathered around him perched on the rocks in a meditative mood, and they didn't seem to mind us joining them along with others who gravitated to the spot. After the bagpiper's concert, while we were eating lunch, another group started making preparations for rappelling down the face of one of the cliffs—a sheer drop if one of them had made a slip! Most of the group wore heavy hiking boots and what looked like leather or nylon harnesses. After fastening a strong aluminum chain around a boulder at the top of the cliff and affixing a pulley-type device, several novices, in turn, attached ropes and haltingly rappelled down the face of the cliff. Then, an older fellow, evidently their leader, rappelled down the face so rapidly and so skillfully that he drew spontaneous applause upon reaching bottom in a matter of seconds. Being on top of Old Rag was as cosmopolitan as any great city, less the crowded population. On our way up Old Rag a scout from California, ahead of his own troop, caught up with us, and later one of my scouts reported having seen a car in the parking area with Hawaiian tags. . . . We lingered on top of Old Rag as long as we could. It was like being on top of the world . . . you could see forever! I wish you'd been along!"

After such a torrent of enthusiasm from my husband Tom upon returning from leading an otherwise routine hike up Old Rag Mountain near Nethers, Virginia, with eleven Boy Scouts, I wished that I *had* been along, even if I *had* been the only Girl Scout in Troop 196.

Perhaps to compensate for my missing such a beautiful 'mountaintop experience,' or, in the faint hope that the bagpiper would return to his haunt, I had an invitation to climb Old Rag with Tom the very next afternoon.

The predawn rain and the heavy morning fog in Cul-

Bluets

(Continued from page 17)

Caribbean in the 1720's. He actually died of fever in Jamaica. He may just have known John Clayton, our Virginia botanist, although he would have been a bit older. Houstoun followed the custom of the scientists of the day in naming many of his discoveries for fellow botanists, and then finally himself received one of the highest scientific accolades, that of having a genus named for him by Linnaeus. It is interesting to think about how many early scientists have become household bywords almost solely on account of the genera which bear their names.

It would be nice to have one's name permanently associated with flowers as attractive as bluets. Round here their appearance means that spring has really properly arrived. They should start blooming at the beginning of April, maybe a little earlier in some sheltered places, and continue at least through July.

OLD RAG

By MARTHA GILES EARLES

Culpeper



peper was not very promising, but by afternoon the fog had lifted and the sky had lightened somewhat. We still could not see the mountains from our home, not even a faint outline of the usually beautiful Blue Ridge, approximately 20 miles to the west of us.

Due to the numerous cars ranged along the sides of the narrow road leading to the very limited parking area, we opted for a short walk to the beginning of the trail. As we passed scouts laden with heavy packs straggling to their leaders' cars, one of them, giving us a sidelong glance, muttered to a friend, "She'll never make it!" Tom, who had been up Old Rag at least 20 or 30 times himself, could hardly suppress a chuckle for he had just been congratulating me on having gone up Old Rag—the hard way—five times.

Though almost immediately enveloped in grey mist as we entered the woods trail, our spirits were not daunted. We were primed to ascend the eastern ridge of Old Rag, which, although it was the steeper, more rugged way, was also the shorter, and for us, the more interesting way.

Hiking along the lower trail we were refreshed by the damp coolness and the lush greens and rich browns of the woods full of hemlock, oak, poplar, and Virginia's perennial dogwood, which was decorously arrayed with larger-than-usual scarlet berries set against the burnished-red background of its leaves. The serpentine

REVISITED

Photo by Thomas T. Earles, III



trail, becoming progressively rockier as we picked our way along it, was sporadically sprinkled with nuggets from the squirrels who seemed to have had a field day cutting acorns. SWHOOSH!! We glimpsed a panicked grouse disappearing into deeper brush.

Hard, grey granite outcroppings, visible only as we stumbled upon them, were stationed in unexpectedly sharp relief against the backdrop of the softer, lighter mist. Picking our way around, over, and sometimes under the rocks, we continuously used our hands for gripping and kept a sharp eye as to where we trusted our footing. Suddenly, looming out of the ethereal mist, almost immediately above and a little beyond us, a gigantic, ghostly viper reared its head. The eerie, diamond-shaped projection of granite almost sent a shiver up my spine. Never before had the granite taken on such spritely prominence in our eyes as it did then. In the shifting mist apparitions arose at nearly every turn.

Rounding a boulder we were met in friendly greeting by two fellow hikers who were descending from the summit. After encouraging us—"You're halfway there!"—we both moved on. Intrepidly we crossed a gap in the granite, perhaps cleaved by an earthquake several eons ago. Intrigued, we climbed the giant steps of the "Indian Staircase" within its walled passage. Stooping, we next entered, what we dubbed, the

"Bear's Cave" (really a tunnel), feeling our way until it brought us out into the grey light again. Still unable to see the ragged ridge as a whole, much less the summit, we continued to thread our way onward and upward, following the blue blaze trail until we were within a stone's throw, though still out of sight, of the summit.

Old Rag's summit at last!

Without hope of a panoramic view, commonplace on any clear day, and with no sign of the red-bearded bagpiper or the bold cliff climbers, we began to think of our stomachs. We'd at least have supper on the summit. As we unpacked our baked sweet potatoes and began to savor those succulent yams, a jagged grey arm of granite jutted out from the moving mist to our left. Then, as startling, it vanished. A moment later the phantom appeared again, this time for a slightly longer interval before being shrouded once again in the mist. Fascinated, we became more attentive to our surroundings, wondering what would be revealed next. Wonder of wonders! It seemed the gates of heaven itself were opening as the cone-shaped peaks of Stoney Man and Hawksbill were unveiled in the distance to the west.

By now the lid of fog had lifted from Old Rag's peak, too, and we found ourselves awestruck in the celestial company of majestic, old friends—timeless, massive granite boulders. Now our vision began to take in detail heretofore obscured. Scarlet Virginia creeper beckoned to us from the cracks and crevices; our reflections gaily mocked us in the little pool of water in the cavity on the boulder where we were seated; and brilliant orange clusters of berries on the diminutive Tree of Paradise almost seemed to shout, "Hallelujah!" Clear, blue sky had broken around and above us, but, just below us, no more than a few hundred yards, stretched a vast and endless sea of billowy white clouds.

After drinking in the marvel for some little while, we reluctantly descended into the grey abyss. The sea of clouds gently swept over us as once again we entered the realm of ethereal mist and ghost-like granite apparitions escorting us homeward. Upon reaching the "tulgey wood" of the lower leg of our descent, the hoot of an owl and the intermittent callings of birds signalled dusk fast approaching. Not a car was in sight when we finally reached the base. We surmised that the scouts and other hikers, who had been in such evidence the previous day and upon our arrival earlier, had exited via the longer, gentler trail, having camped in the vicinity of the Byrd's Nest on the western slope of Old Rag. Rain in the night and fog had apparently rooted them out and chased them down about the time of our ascent.

Jogging the last few hundred yards to the car on paved roadway, we felt invigorated by our 7-8 mile hike and inspired by our fortunate and unexpected revelation on top of Old Rag. There had been no bagpipes playing Greensleeves that day; yet, just the same, there had been special music on the heights of Old Rag, and it had truly spoken to us. I wish you'd been along!

Nature's Daily Mystery

By CHARLOTTE HILTON GREEN
Raleigh, North Carolina

A NATURE activity that can be used the year round, indoors or out, with adults or children—or both—and in the schoolroom, scout club, 4-H setups, summer camps, church activities, even at parties, is this “What Is It?”

This I called it back in my school teaching days, and later found a similar, but cleverer, device at the Audubon Camp in Maine. It is their title I have since used.

Briefly, the device is a wall chart with this title printed on it. The chart can be attractively decorated with sketches, or colored cutouts. (In the schoolroom I found it best to have the decorations seasonal, and, too, the chart becomes bedraggled in time, and besides, children like “new faces.”) On this chart the “mystery” is tacked, put on with transparent tape, or just written words.

It can be the object itself, a picture, statement, or query, a bit of descriptive verse, even a conundrum. It can take many forms and youngsters, in particular, like variety.

Nearby, on shelf or table, is the “Mystery Box” (shoe, candy, or cigar box will do) with top fastened down and slit in it. Close by are small slips of paper for the answers and the child's name, and a pencil, hanging on string, so it will not be mislaid.

At the end of each day or session the teacher or leader takes down the mystery and checks names and answers in the box. The following morning a new “mystery” is put up, the correct answer to the previous one given, and the names of all who answered it correctly. I found it simpler to list names alphabetically, with a check after them for each day for those who gave the right answer. Children take pride in making a good score.

(One year, in school, we tried placing a green star by names of all who had made a week's score correct, a blue one for 2nd week, silver for 3rd, and gold for the 4th. The next month we began all over again, and there was great pride and rivalry for the gold stars.)

Granted, all this means extra work for the teacher, but it also means “extra dividends” in creating interest, developing observation in children, plus a feeling of co-operation and a growing understanding of conservation.

I've started this project at both scout and church camps, and have been asked to give talks about it. At our state's annual 4-H Wildlife Conference, where a group of outstanding boys and girls from all parts of the state have won this Camp Week as a reward for successfully carrying out various wildlife projects, and

where for years I had charge of Nature Activities, we changed the mystery three times daily. This was at the children's request, as the camp lasted but five days, and it was always one of the most popular features.

Of course, great ingenuity must be exercised, not in the material, but in manner of presentation. And most important, it should be adjusted to age and natural history background of children. (And here I am distressed to state, far too many children are not getting as good training in natural history and conservation as did those of a decade or two ago.)

It is unfortunate that the Junior Audubon Clubs—which had had some eleven million children participating—is no longer functioning. “Teachers and children are too involved with other things,” I've been told. And too, many of today's children are spending too much time with TV—which can, and does, have some marvelous programs for them—but also too many that are harmful. With today's crime and vandalism rampant, we need to get back to knowing and understanding more about the good earth and its plant and animal life. Today's children may hear about pollution and environment, but too many do not know the bird and flower by the roadside.

Mystery No. 1. “I am a small gray bird with rusty flanks, a tufted crest, and a clear whistled: *peter, peter; peter*. Name me.” Answer, tufted titmouse.

Mystery No. 2. For good tree students try this: “I am a tall stately tree with unusual-shaped leaves and lovely flowers that give me my common name; I bear “cones” that are not true cones, and how certain birds love the seeds in it! I am a valuable timber tree. The Indians and some of the early settlers made dug-out canoes of my great trunks. I am native only in eastern America—and far away China.” Name me. It is tulip tree.

No. 3. Here's a rhymed query. “Name me.”

“He is something of an acrobat,
If you watch him you will see,
Instead of hopping upwards,
He hops headfirst down a tree.”

Of course, anyone knowing birds will instantly recognize the nuthatch.

And right here I should point out that there should be “clues” to all the mysteries, somewhere in schoolroom or camp, or wherever it is held—in books, magazines, placards, posters, charts, other devices, where those participating can run down the answers.

When I attended the 4-H Camp I always loaded the

car with a vast amount of charts, materials in posters, books, magazines, placards on birds, trees, flowers, insects, animals, stars, ferns. By tying up the "mysteries" with things seen on our early morning hikes, with questions and answers, with lectures of other members of the staff and their field trips, we covered a wide range. There was much for the youngsters to "run down," and they became familiar with some of the best of nature literature.

My nature library is a bit more worn and thumbed than if it had remained on the shelves in my study, but throughout the length and breadth of the state the children who came to the camps in those years have a better idea of good nature literature—to say nothing of having practice in using an index.

No. 4. Children love the intriguing kind, so try this.



What part of my anatomy names me? (White-throated sparrow)

Have picture of bird completely covered by sheet of paper. On top, "Three keys to this mystery." Below, cut a slight opening in paper, showing crest. Another opening showing red drops on ends of wings. Still lower, a cut with flap and words. "Lift the flap and take a peep." (The flap should be over yellow band on end of tail.) All these identify the bird as cedar waxwing.

No. 5. Nor should the stars be overlooked. With our recent Apollos and their astronauts walking on the moon, "sky mysteries" should be popular. Draw an outline of an easily recognizable constellation—as the Big or Little Dippers, Cassiopeia, Orion, and the query "Name me." Yet another query, "What is the largest

planet?" Or, "Which planet is nearest the sun?"

Or "Heavenly Arithmetic." "If light travels at rate of 186,270 miles a second, how far would it travel in four and one-half minutes?"

Some times a picture of a bird can be used, as this: "What part of its anatomy is it that names this sparrow?" The answer, "Its white throat." (White-throated sparrow.)

The possibilities are endless. Too, children soon learn—and enjoy sharing—the responsibility of providing some of the "mysteries" and once the thing is under-way, they can be used. Too, the teacher or leader can have materials on hand, a sort of "Mystery Bank" for days when she has been too busy to garner something.

As for going stale? Never, in my own wide experience. And in teaching I found it an excellent means of getting children to school on time. And here let me quote from one of my student teachers I had in an eastern town—a class in Nature Study requested by the principal. We met once a week in the room of the biology teacher in the high school. When I first introduced "Nature's Daily Mystery" to this class of teachers she—and the others—were delighted, but her comment, "How in the world could I find a new mystery, that is usable, for every school day in the month, much less for a year?"

Three years later she wrote me: "We are still using the "Mysteries" and they are more popular than ever. We haven't missed a single school day. There's a rush each day for the children to get into class to see the day's mystery and to be one of the first to solve it. Usually the whole high school drifts in sometime during off periods of the day to see what we have, and we rate a write-up in the school paper several times a year. My chief regret is looking back to the boys and girls who passed through my biology classes in the years before, without any of this nature work."

An excellent mystery that will require a little knowledge of trees and a bit of thinking might be a spray of white oak leaves and its acorn. The query might be: "Is the acorn this year's or last year's fruit? The answer is in the leaves. Can you tell it?"

Answer is, "This year's fruit." For this tree belongs to the white oak group whose leaves have rounded lobes and acorns take one year to mature, while the other group, the black oaks, have sharp points on the leaves, and the acorns take two years to mature.

One I always use—it is an easy way for children to learn the poisonous from the other somewhat similar looking plant with which it is often confused—is a photograph of two native plants—one with three leaflets, the other with five. Beneath is the legend.

"Leaflets three, quickly flee,

Leaflets five, let it thrive.

Berries white, quick, take flight

Berries red, show no dread." What are they?

The first, poison ivy; the other, the harmless and beautiful Virginia creeper.

AMERICAN FOXHOUND SHOW SET FOR ROANOKE

BY F. N. SATTERLEE
Information Officer

THE Virginia International American Foxhound Club, a recently formed sportsman's organization, has scheduled their first annual Bench Show for April 15, 1972, at the Hotel Roanoke in that city. The Virginia International is affiliated with the International American Foxhound Club in Tulsa, Oklahoma, and is the first state club to become organized. Eventually a large number of state organizations is hoped for in order that a Bench Show circuit be established to conduct a regular series of these competitive events.

American Foxhound Bench Shows were initially developed back in the early 1900's in an effort to produce a better working or running hound in the field. The bench shows differ from field trials in that the latter event is held in the field where the hounds are judged on their ability to hunt, trail and run a fox. In a bench show the animals are judged on their conformation.

The American Foxhound was designated as the official dog of the Commonwealth by the Virginia General Assembly in 1966. In this capacity the hound joined the cardinal as the official bird, the dogwood bloom as the official state flower, and "Carry Me Back To Old Virginia" as the official song.

The Roanoke event is scheduled to begin at 1 p.m. on the 15th of April with the presentation of a seminar on the "Standards of Perfection of the American Foxhound" by the Reverend B. B. Sawyer of Forth Smith, Arkansas. A large number of hounds are expected to be entered in the competition, with contestants coming from as far away as Oklahoma and Mississippi. For further information, interested persons should contact Mr. William O. Taylor, club president, at 3129 Robert Evans Drive in Fairfax, Virginia 22030. His phone number is (Area code 703) 280-2428.

Terrible Trio

(Continued from page 9)

65°-70° F range, the redbreast builds his nest in shallow water over a gravel bottom. After being hooked, the redbreast fights like a banshee twice his weight, constantly boring down and away into the current. He comes in to the rod tail first in defiance.

Defiance may seem an odd word when applied to the bluegill, for he is the quietest and most reserved of our trio of stream dwellers. To be fair, he is more at home in a lake, but he's often met in still sections of rivers or streams. In contrast to his two eager cousins, the bluegill can be finicky when it comes to artificial lures. He must be approached with respect and stealth.

This has been a sadly brief description of what awaits the angler in Virginia streams. A large part of

VOICES A WARDEN IS ANXIOUS, EXPECTING AND RELUCTANT TO HEAR

By DONALD R. MILLER
Warden Patrol Leader, Warm Springs

1. Where can I go and kill a big buck?
2. I don't think there are any fish in here.
3. Why do you wear that pistol?
4. Where have you been, on vacation??
5. How much was hogs on the Staunton Market last Tuesday?
6. Them dogs don't have tags—why don't you give them tickets?
7. I got a big doe out there in the trunk. (Ha-Ha)
8. Who do I see about being a Game Warden?
9. I musta miscounted—there's 15 here, but I thought I had 8.
10. Boy, if I was a Game Warden I could catch 'em.
11. What are they biting today?
12. O.K., but I'm gonna get me a lawyer.
13. That's one of them old deer that they stocked here in 1932.
14. I weren't fishing; I was holding that pole for Jr.
15. Where's the turkeys at?
16. Now I don't want no trouble, so don't tell them I told you this, but . . .
17. You wait until election time; I ain't votin' for you.
18. I didn't know I had to have a license for that!
19. Why does that man catch fish, and they don't bite my hook?
20. Why don't you give these local people tickets?
21. Man, now you've got the kind of job that I'd like to have.
22. Good morning! It's 6 A.M. — Did I wake you up?????????
23. Well that might be the law, but I don't think it's right.
24. Why don't you catch them other violators?
25. Honey, that phone has been ringing off the hook. Here are some numbers for you to call.

the lure of sunfishing in moving water is the always changing experience; every bend of the stream is another world to explore, another sight to marvel at in the sincerest sense of "marvel." Lay your bass rod down for a day or so, look up the tough featherweights of Virginia waters. Limits on sunfish are liberal with good reason. They are a prolific family, so no qualms should be felt about extracting heavy stringers.

Know Your WARDENS

Text and Photos by F. N. SATTERLEE
Information Officer

V. J. WHITMER
*Supervising Game Warden
Thomas Jefferson District*



West Virginia born, and having called Virginia "home" for all but two years of his life, Jennings Whitmer comes by his love of the out-of-doors and wildlife naturally. His father was an ardent outdoorsman and hunter who successfully passed on his love and appreciation of such things to his son.

During World War II Mr. Whitmer served in the U.S. Army for three years with overseas duty in Europe and, during the Korean conflict, for nine months in that country.

In 1955 he joined the Game Commission as a warden. His initial assignment was to duty in Rockingham County. During May of 1960 he was promoted to Supervisor. In this capacity he is responsible for the activities of the wardens in the 18 county Thomas Jefferson District of the Commission's Law Enforcement Division. Since the inception of the game wardens' interview board and training school in 1962, he has played an important part in that activity.

Jennings is married to the former Miriam Dove of Singers Glen, Virginia, and he is currently chairman of the Board of Trustees of the United Methodist Church in that community. He and Mrs. Whitmer live in Linville.

DONALD L. MONTGOMERY

Donald L. Montgomery was born in Cherokee, Iowa. Although he spent much of his summer vacation, as a youth, at his uncle's cabin in northern Minnesota, he grew up all over the country. This transient state resulted from the fact that his father was a career Navy man and with the changes of assignment the family moved often.

It was during the Minnesota summers that Don became interested in the out-of-doors and wildlife. This interest stayed with him as he matured, finished school and during the nine years that he served in the U.S. Marine Corps. After the Marines he spent three years as a member of the Chesapeake, Virginia, Police Department, but the urge to work with wildlife and in the out-of-doors remained and he became a Virginia Game Warden in March of 1967.

His first duty was an assignment to Virginia Beach. Currently he is the warden in Charles City County, where he, his wife, the former Beverly Stallings of Charlotte, North Carolina, and their four children make their home.





Edited by HARRY GILLAM

Bass-Rockfish Tourney Scheduled



These happy anglers were among the many who participated in the Jaycees' Bass and Rockfish tournament last year. The boat in the background was one of two that were presented to anglers catching the largest fish of each species, an 8 pound 5 ounce bass and a 25 pound 4 ounce rockfish.

The Roanoke Rapids Jaycees have announced their Second Annual Bass and Rockfish Tournament, to be held May 13 and 14, 1972, which will include fish taken from Lake Gaston and Roanoke Rapids Lake. Tournament Chairman Dave Lamb reports that the Jaycees hope to have even more than the \$7,000 worth of merchandise prizes that were awarded to lucky anglers last year. "By awarding prizes on the basis of the largest fish rather than total poundage we feel that this adds a "bit of luck" to the average person's chances and distracts from the advantage that a professional fisherman might enjoy," Lamb said. The registration fee is \$5 and is not refundable. Application blanks and information may be obtained by writing Fishing Tournament, Roanoke Rapids area Chamber of Commerce, P. O. Box 519, Roanoke Rapids, North Carolina 27810. Any proceeds above expenses of the tournament will be used by the Jaycees for the support of

local charitable institutions and for local community improvement projects.

Wildflower Pilgrimage

The Science Museum Association of Roanoke Valley in cooperation with the Blue Ridge Parkway and the Roanoke Valley Bird Club announces that its third Spring Wildflower Pilgrimage will be held April 28-30. Walks, talks, and motorcades will be included, centering around Roanoke and the Peaks of Otter, and will be led and given by qualified persons. Registration fee is \$2.00 for adults and \$1.00 for students. All interested persons are invited to send for a brochure by writing to P. O. Box 20, Roanoke, Va. 24015.

A. P. Hill Trophy



Bob Scruggs of Reston bagged this handsome buck with a 21 inch spread on the A. P. Hill military area last season. He got a doe at the same spot a week prior to downing the buck, which weighed 132 pounds dressed.

New Refuge Manager for Back Bay National Wildlife Refuge Announced

Dennis F. Holland has been named refuge manager at Back Bay National Wildlife Refuge, succeeding Robert E. Gilmore, who was selected for the two-year Departmental Training Program.

Holland will serve as refuge manager for three areas: Back Bay National Wildlife Refuge, consisting of 8,523 acres located near Princess

Anne; Fisherman Island National Wildlife Refuge, 1,000 acres located at the north end of the Chesapeake Bay Bridge Tunnel; and Mackay Island, 6,824 acres situated near Knotts Island in North Carolina. The three refuges provide winter sanctuary for more than 100,000 migratory waterfowl, as well as year-round habitat for large concentrations of shore, marsh, and water birds, furbearers and other forms of wildlife. The areas are important to the southward migrating Canada geese, snow geese, swans, and shore birds.

Wilderness Trips Available

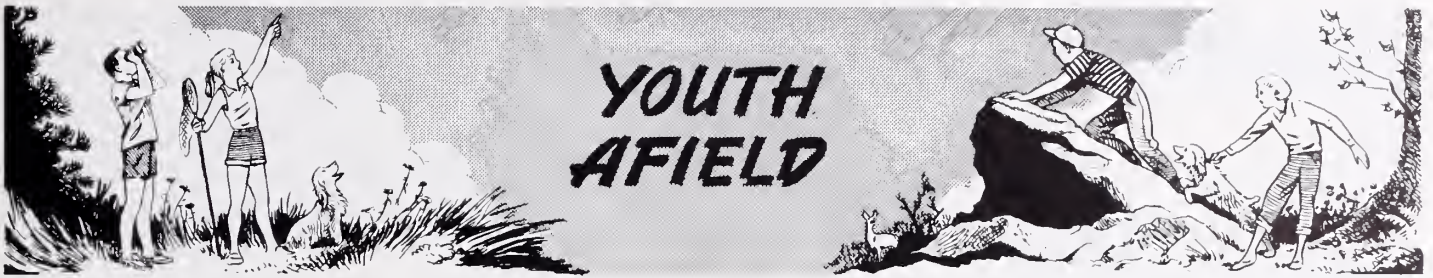
Ninety-three outings in wilderness areas in 13 states and Canada have been scheduled in The Wilderness Society's A Way to the Wilderness trip program for 1972.

The Wilderness Society is a non-profit national conservation organization founded in 1935 to foster protection of roadless wilderness. It has some 70,000 members. Membership is not required for participation in the Society's outings.

The trips, ranging from five to 12 days with six to 18 in a party depending upon type of trip, will be led by qualified outfitters and trip directors. On most trips participants do not bring major equipment, since it is provided by the outfitters. Nor is wilderness outing experience needed. Complete arrangements are made by the Society's staff and outfitters from start to trip completion.

Ski touring and snowshoe trips in the Colorado Rockies are the earliest on the schedule. The list also offers a wide choice of horseback, canoe, float and backpacking trips, as well as walking expeditions with packstock carrying the gear. The outings will offer opportunities for nature study, fishing and photography.

A free booklet describing all 93 trips and including an application form is available from Trip Department, The Wilderness Society, 4260 East Evans Avenue, Denver, Colorado 80222.



Edited by ANN PILCHER

Wythe Students Win Awards



Pictured with uniformed Wildlife Refuge Manager Virgil C. Boone of Speedwell are Wythe County wildlife food patch contest winners: Clarence Stone, Gary Lindamood, Douglas Wilson, Jeb Huddle, Stanley Sisk, Keith McAllister, Barry McAllister, Joe Kelly, Eugene Alley, Daryl McMillan and Douglas Jackson. Not pictured: Dennis Phillips.

Courtesy Southwest Virginia Enterprise

In January the Big Walker Game and Fish Club presented cash awards to 12 students from Wythe County as winners of the 1971 Wildlife Food Patch Contest sponsored by the club. There were three winners from each of the following high schools: *Rural Retreat H.S.*—Douglas Wilson \$20, Daryl McMillan \$15, Douglas Jackson \$10; *George Wythe H.S.*—Joe Kelly \$20, Keith McAllister \$15, Barry McAllister \$10; *Wythe County Vocational School*—Stanley Sisk \$20, Dennis Phillips \$15, Clarence Stone \$10; *Fort Chiswell H.S.*—Gary Lindamood \$20, Eugene Alley \$15, Jeb Huddle \$10. An extra prize of \$20 for best patch in the entire county was won by Gary Lindamood, Fort Chiswell. Vocational Agriculture teachers from each of the schools were praised for their instruction and guidance in encouraging the boys to participate. Patches were judged by State Game Warden Robert Mitchell and Wildlife Refuge Supervisor Virgil C. Boone.

Birthday Present



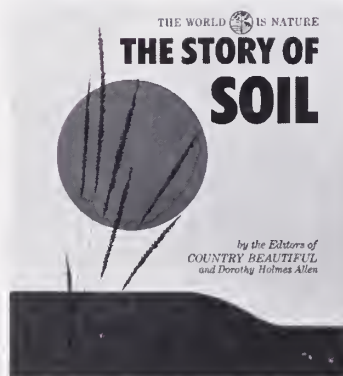
← Teddy Webb, son of Mr. and Mrs. Harvey Y. Perkinson of Prince George, shot his first deer on December 4—date of his 12th birthday. The 7-point buck was taken in Richmond County.

→ Billy Kirkland, left, and Danny and Wayne Ecker were among neighborhood boys who caught fish with their hands in Timber Lake off Quioccasin Road in Henrico County. The six bass pictured were taken on January 24 while the lake was being drained. Four measured 20" in length, one was 18", and one 19". Billy's mother, Mrs. Virginia N. Williams of Farmington Drive, reports that "as all fish stories go, the boys insist one twice as big 'got away.'"

Author—



Dorothy Allen



THE STORY OF SOIL, a 1971 publication by the editors of *Country Beautiful* through G. P. Putnam's Sons, was written especially with children in mind, but adults interested in rudimentary soil study would also find this book extremely helpful and interesting. Colorfully illustrated by James Milton Smith with text by Dorothy Holmes Allen, the 63-page book (\$4.69)

describes how soil is made and how it is destroyed; how man can affect the health of this valuable resource and how, in return, soil affects man's living. We are especially pleased to recommend this book, for Mrs. Allen was a member of the Education Division of the Virginia Game Commission from 1961 till June 1966 and, in her capacity as Education Officer, wrote a number of teaching booklets and magazine articles about nature study and conservation. She received her bachelor's degree in education from Oregon State College and master's degree in conservation from the University of Michigan following service as a flight planner during World War II in the Women's Reserve of the Marine Corps. She has been a meteorologist in Alaska; women's activities coordinator for the U. S. Forest Service; and is presently teaching school in her native state of Missouri.

No Line or Lure Needed



ON THE WATERFRONT



Edited by JIM KERRICK

Boating Safety Award



Photo courtesy Winchester-Western

Admiral A. C. Wagner presenting Olin Boating Safety Award to Assistant Supervisor Gerald Simmons in the presence of Mrs. Simmons.

The Olin Marine Safety Award for 1971 was presented to Gerald P. Simmons, Assistant Game Warden Supervisor, Patrick Henry District, Virginia Commission of Game and Inland Fisheries on January 22, 1972, in a special presentation ceremony conducted in the Blue Room of the Essex House in New York City.

The Olin Marine Safety Award is presented each year by the Energy Systems Division of Olin Corporation to an individual who has been judged to have made an outstanding contribution in the field of writing, or search and rescue, training or education that advances the cause of safe boating. The winner is selected by a panel of judges made up of editors from *Boating*, *Boating Industry*, *Motor Boating*, *Rudder*, *Yachting* and *The New York Times*, and their selection is based on nominations submitted by members of the National Association of Safe Boating Law Administrators (NASBLA) and the U. S. Power Squadrons across the country.

Mr. Simmons' award was presented jointly by Keith R. Zimmermann, corporate vice president and general man-

ager of the Energy Systems Division, and Rear Admiral A. C. Wagner, Chief, Office of Boating Safety, United States Coast Guard.

During the 1971 year, Mr. Simmons participated in 25 search and rescue missions without the loss of one life and his efforts on Virginia waters resulted in 2,981 boat safety inspections of which 59 were cited for a boating violation. During the year he spent a total of 540 hours in boating safety patrols and devoted an additional 152 hours to public relations work and the promotion of boating safety, including two weekly radio programs which he conducted on the subject. In May, 1971, he received an outstanding boating safety award from the National Water Safety Congress for "his constant efforts in promoting water safety."

The Olin Marine Safety Award for 1971 is the fourth such award presented by Olin's Energy Systems Division. Previous winners are David J. Nunes of Peabody, Mass. (1968), Ron Bartlett of Portland, Ore. (1969) and Tom G. Shackelford of Montgomery, Ala. (1970).

Did You Know

... that 44,070,000 persons participated in some sort of recreational boating activity at least twice in 1970?

... that 8,814,000 pleasure boats of one kind or another were registered to operate on U. S. waters?

... that Americans own 5,210,000 outboard boats and 7,215,000 outboard motors?

... that there are over 5,900 marinas, boat yards and yacht clubs in the United States?

... that more than 620,000 sailboats without any form of auxiliary power are in use throughout the United States?

... that if all pleasure boats registered in the U. S. in 1970 were laid end to end, they would stretch 26,696 miles or around the world at the equa-

tor with enough boats left over to stretch from the Atlantic to the Pacific?

... that one of the best ways to brush up on your ability as a boatman, if you are an old salt or a beginner, is to take advantage of any of the free courses on boating offered by the U. S. Coast Guard Auxiliary or the U. S. Power Squadrons?

Flotilla Steals Limelight in Boat Show

Big event of the Southside Virginia Boat Show, which ran from February 16 to 21, was the Flotilla 32 Boating Safety Demonstration and exhibit. Flotilla members, in uniform, attracted a large crowd and engendered considerable interest among the audience. During the demonstration, fire extinguishers, personnel flotation devices, first aid kits, mooring, towing and heavy lines, anchors, compasses, horns, whistles and other items were exhibited and discussed.

According to the Flotilla CME Officer, William C. Allen, many people asked how and when they could get their boats inspected. Questions on this subject arose as the result of a large sign proclaiming the availability of examiners. Flotilla Commander William O. Antozzi estimated that several thousand people saw the exhibit.

Beaching

Keep larger craft out of extremely shallow water. Even if the depth seems OK, the tide might go out and leave you high and dry. Look for darker, deeper water. Stay clear of light-colored, shallow water. Drop a stern anchor to keep stern away from beach and propeller out of mud and sand. Use a dinghy or wade to the beach. Anchoring from the stern also makes it easier to get a larger boat from the beach. When hauling in anchor line, the boat is automatically pulled away from the shore.

THE wild turkey has figured prominently in the affairs of Virginians since the time of the first settlers; and even before, since they were used as food and ornament by the Indians.

Wary and sagacious, the turkey withstood the advances of a civilization that eradicated many forms of wildlife, and it never completely disappeared from the sparsely populated sections of the state.

There was, however, a time when things looked dim. In the years following the Civil War, when there were no game laws of any sort, and turkeys were regularly sold in public markets, their numbers were reduced drastically. By the turn of the century, they were in danger of being wiped out.

lished by the Biological Society of Washington in 1929, states that turkeys "remained fairly common in the wilder sections (near Washington) until 1890. The latest definite date of breeding within our area was of eggs found near Falls Church, May 3, 1903." It may be assumed, then, that by the early 1900's, the species was holding out in only the more remote areas of the state.

The road to recovery began in 1916 with the passage of a bill creating the Virginia Game and Inland Fisheries Department. Subsequent laws granted seasonal protection. The state began a restocking program, using at first pen-reared birds. No real progress was made, though, until wild blood was introduced into

Bird of the Month:

The Wild Turkey

BY JOHN W. TAYLOR
Edgewater, Maryland



This decline has been well documented in various reports on the birds of the Washington, D.C., region. The first such paper, published in 1862 as part of the Annual Report of the Smithsonian, lists the turkey as still common within the limits of the District. In the next list, Bulletin 26 of the U.S. National Museum, the authors, Coues and Prentiss, state that "... we doubt that a live wild turkey has been seen in the District or immediate vicinity for several years, though the birds are constantly brought from surrounding country to the city for sale." In their second list (1883) the same authors record that "two were shot in the winter of 1881-2 near Georgetown." Two others were killed near Falls Church that same winter. The next list, pub-

game farm stock, and eventual success came only with the transplanting of wild-trapped birds.

Mosby and Handley, in their fine monograph "The Wild Turkey in Virginia," (now out of print) stated that in 1938 there were wild birds in 69 of the 100 counties. Since then they have become reestablished in other counties, and prosper wherever there is suitable habitat.

For details on the life history of the wild turkey, the reader is referred to the above mentioned book by Mosby and Handley, but it is hard to find. A more recent and generally available publication is *The Wild Turkey and its Management*, published by the Wildlife Society in 1967.

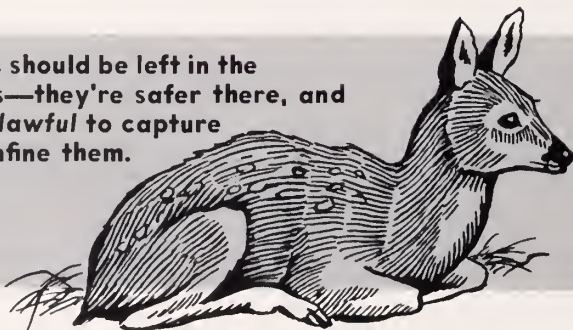
It's Unlawful to keep

Wildlife in Captivity

Wildlife is the property of the State, and may be kept in personal possession only during established seasons, and then only when taken by lawful means. This applies to capturing and keeping alive as well as killing. It is illegal, therefore, to possess wild birds and game animals, *dead or alive*, except during authorized seasons, and in any event wildlife protected by closed seasons may not be kept in captivity. Species protected by closed seasons include bear, deer, fox, rabbit, squirrel, beaver, mink, muskrat, opossum, otter, raccoon, and all native wild birds except crows, buzzards and jays.



Bear cubs are frequently involved in illegal possession cases.



Fawns should be left in the woods—they're safer there, and it's *unlawful* to capture or confine them.

JWT



GRAY SQUIRREL



COTTONTAIL



RACCOON

Although game species, none of the above mammals may be legally kept in captivity.